

said ground potential conductor member comprises a negative cooling fin including negative rectifiers mounted thereon,

said insulation member comprises a spacer having a hole that maintains a space between said two fins, and

said sacrificing metal member comprises a flanged member disposed between said spacer and said positive cooling fin, thereby forming a rectifier of said vehicle AC generator to be fastened to a frame of said vehicle AC generator by a fastening member piercing said spacer.

REMARKS

Claims 1-6 are pending. By this Amendment, the title, specification and claims 1, 2 and 4 are amended. The attached Appendix includes a marked-up copy of each rewritten paragraph (37 C.F.R. §1.121(b)(1)(iii)) and each rewritten claim (37 C.F.R. §1.121(c)(1)(ii)).

Applicant appreciates the courtesies extend to Applicant's representative during the personal interview conducted on March 3, 2003. Applicant's separate record of the substance of the interview is incorporated into the following remarks.

The drawings are objected to for failing to comply with 37 C.F.R. §1.84(p)(5) for including reference characters not described in the specification. The specification is amended in reply to the objection. Support for the amendment may be found at least in Fig. 3A. Thus, no new matter is added.

The Office Action alleges that the title of the invention is not descriptive and requests a new title clearly indicative of the invention to which the claims are directed. The title is amended in reply to the rejection.

Claim 2 is rejected under 35 U.S.C. §112, second paragraph. Specifically, the Office Action alleges there is insufficient antecedent basis for the feature "said conductive liquid" in

claim 2. Claim 2 is amended in reply to the rejection. Thus, Applicant respectfully request the rejection of claim 2 under 35 U.S.C. §112, second paragraph, be withdrawn.

Claims 1 and 2 are rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 5,977,669 to Yoshida et al. (Yoshida). The rejection is respectfully traversed.

As discussed and agreed during the personal interview, the claim amendments distinguish over Yoshida. Accordingly, Applicant respectfully requests the rejection of claims 1 and 2 under 35 U.S.C. §102(b) be withdrawn.

Claims 1-4 are rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 6,034,452 to Nakamura et al. (Nakamura) and Yoshida. The rejection is respectfully traversed.

As discussed and agreed during the personal interview, the claim amendments distinguish over the applied references. Applicant respectfully requests the rejection of claims 1-4 under 35 U.S.C. §103(a) be withdrawn.

Claims 1, 2, 5 and 6 are rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 6,150,741 to Hayashi et al. (Hayashi) and Yoshida and U.S. Patent 5,710,467 to Irie et al. (Irie). The rejection is respectfully traversed.

As discussed during the personal interview, Applicant asserts that the combination of the applied references does not disclose or suggest all of the features recited in claims 1, 2, 5 and 6. For example, the metal bush in 55 of Hayashi is disposed between a positive output terminal 54 and a resin spacer 9. However, the material of the output terminal and the metal bushing is not disclosed, as admitted in the Office Action. To overcome the admitted deficiency, the Office Action combines Yoshida and alleges that the iron disclosed in Yoshida is a cool conductor for use with the cooling fins of a rectifier. However, if the material of the positive output terminal 54, or the metal bushing 55 is iron, then the metal

bushing 55 is not a sacrificing metal that has a lower than normal electrode potential than the positive output terminal 54, even if the metal bushing 55 is iron.

Furthermore, the metal bushing 55 is not a sacrificing metal member disposed in a space between the positive conductor member and the insulation member to cover a surface of the positive conductor member disposed in the space from the insulation member, as recited in the rejected claims.

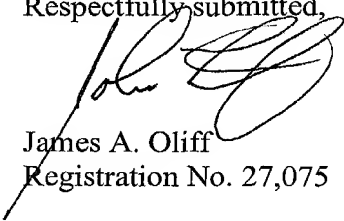
The Office Action alleges that Hayashi teaches a rectifier with plus and minus cooling fins 52, 53 separated by an insulating bushing 51, including a metal bushing 55 within a resinous spacer 9. However, the alleged insulating bushing 51 is a terminal base plate 51 having electrical wiring electrodes thereon, a positive pole side heat radiation fin 52 mounting three rectifier diodes thereon, a negative pole side radiation fin 53 mounting three rectifier diodes thereon, and an electrical power output terminal 54 attached to the positive pole side heat radiation fin (col. 2, lines 41-47). Thus, the terminal base plate 51 is not an insulating bushing as alleged in the Office Action. Accordingly, Hayashi does not disclose a vehicle rotary electric machine having a rectifier protection arrangement including a positive conductor member...a ground potential conductor member and an insulation member disposed between the positive conductor member and the ground potential member (See Fig. 1 of Hayashi).

As Irie is not discussed in the Office Action, no argument regarding Irie is provided. Accordingly, Applicant respectfully requests the rejection of claims 1, 2, 5 and 6 under 35 U.S.C. §103(a) be withdrawn.

In view of the foregoing, reconsideration of the application is requested. It is submitted that the claims as presented here and patentably distinguished over the applied references and fully meet the requirements of 35 U.S.C. §112. Accordingly, allowance of claims 1-6 is respectfully solicited.

Should the Examiner believe that anything further is desirable in order to place the application in better condition for allowance, the Examiner is invited to contact Applicant's undersigned representative at the telephone number set forth below.

Respectfully submitted,



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Attachment:
Appendix

JAO:JWF/ldg

Date: March 4, 2003

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<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>
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APPENDIX

Changes to Title:

The following is a marked-up version of the amended title:

A VEHICLE ROTARY ELECTRIC MACHINE WITH A RECTIFIER PROTECTION
ARRANGEMENT HAVING A SACRIFICIAL MEMBER

Changes to Specification:

The following is a marked-up version of the amended paragraph(s):

[0044] A copper-made positive fin 55 is disposed on the side of a cover 51 and a negative fin 57 is disposed on the side of a frame 50, which maintains the same effect as the first embodiment. Reference numeral 56 is an insulation bush, and reference numeral 58 is a iron bush. The iron bush 58 has a cylindrical portion and a flange that is disposed between the bush 58 and the positive fin 55. The bush 58 has four projections 581 on the outer periphery of the cylindrical portion. The mold material of the terminal unit 54 may be thermoplastic resin or similar material. A bolt 52 is inserted into a fixing hole of the cover 51 so that the cover is fastened to the frame 50 by a nut 53.

Changes to Claims:

The following is a marked-up version of the amended claim(s):

1. (Amended) A vehicle rotary electric machine having a rectifier protection arrangement, said protection arrangement including a positive conductor member that has a higher normal electrode potential than hydrogen, a ground potential conductor member and an insulation member, disposed between said positive conductor member and said ground potential conductor member, for insulating said positive conductor member, wherein
a sacrificing metal member that has a lower normal electrode potential than said positive potential conductor member is disposed in a space between said positive conductor member and said insulation member to cover a surface of said positive potential

conductor member disposed in said space from said insulation member and form an oxidized layer of said sacrificing metal member when conductive liquid exists in said space, and said sacrificing metal member has a higher electric resistance than said positive potential conductor member if oxidized.

2. (Amended) The rotary electric machine as claimed in claim 1, wherein said sacrificing metal member are soluble as metal ions in ~~said~~ conductive liquid even after an oxidized layer of said sacrificing metal member is formed on the surface thereof if the surface of said oxidized layer is covered with conductive liquid.

4. (Amended) The rotary electric machine as claimed in claim 1, wherein
said positive conductor member comprises a positive cooling fin including positive rectifier elements mounted thereon,

said ground potential conductor member comprises a negative cooling fin including negative rectifiers mounted thereon,

said insulation member comprises a spacer having a hole that maintains a space between said two fins, and

said sacrificing metal member comprises a flanged member disposed between said spacer and said positive cooling fin ~~one of said fins~~, thereby forming a rectifier of said vehicle AC generator to be fastened to a frame of said vehicle AC generator by a fastening member piercing said spacer.